

ABSTRACT

An optical wavelength router receives multiplexed bundles of wavelength channels from input optical fibers, processes the channels, and outputs the processed channels
5 onto output optical fibers. The router separates one or more of the channels from the received bundles and couples the separated channels into a switching fabric. The remaining, i.e., pass-through, channels are multiplexed with wavelength-converted "add" signals and input into
10 channel combiners. The outputs of the switching fabric may be "dropped," or coupled to the channel combiners for multiplexing with the pass-through and the add channels. A second switching fabric may be interposed between the output ports of the channel combiners and the output
15 fibers, and a redundant path through the router may be included for path fault protection.